CLAIMS

1. An automatic transmission comprising:

an input shaft that rotates based on the output rotation of a drive source;

a reducing planetary gear comprising an input rotation component that can input the rotation of said input shaft, a rotation fixing component that fixes the rotation, a reduced rotation component that can reduce rotation speed based on the rotation of the input rotation component and the rotation fixing component;

engaging means for operating the rotation of said input rotation component or the rotation of said rotation fixing component;

a planetary gear unit comprising a first rotation component and a second rotation component and a third rotation component and a fourth rotation component for inputting the reduced rotation of said reduced rotation components;

a first clutch for linking said input shaft and said second rotation component so as to be capable of disengaging;

a second clutch for linking said input shaft and said third rotation component so as to be capable of disengaging; and

an output member for outputting the rotation of said

fourth rotation component into the drive wheel transmitting device, wherein;

at least five forward speeds and one reverse speed can be achieved, and said first clutch and said second clutch can be engaged together while at fourth speed forward;

and wherein said planetary gear and said engaging means are configured on one side in the axial direction of said planetary gear unit;

and wherein said first clutch and said second clutch are configured on the other side in the axial direction of said planetary gear unit;

and wherein said output member is disposed between said planetary gear unit and said reducing planetary gear and said engaging means.

2. An automatic transmission according to Claim 1, wherein said engaging means is a first brake capable of fixing said rotation fixing component.

3. An automatic transmission according to Claim 1, wherein said engaging means is a third clutch located between said input shaft and said input rotation components, and a first brake capable of fixing said rotation fixing component.

4. An automatic transmission according to Claim 1, wherein said engaging means is a third clutch located between said input shaft and said input rotation components.

5. An automatic transmission according to either Claim 3 or 4, comprising a second brake capable of fixing the first rotation component wherein said reduced rotation is input;

wherein said second brake and said third clutch each comprise a friction member and an oil pressure servo for pressing said friction member;

and wherein the friction member of said third clutch is disposed on the inner circumference side in the radial direction of the friction member of said second brake.

6. An automatic transmission according to any one of the Claims 3 through 5, wherein said third clutch is configured between said reducing planetary gear and said output member;

and wherein the drum member of said third clutch is configured so as to open toward said reducing planetary gear.

7. An automatic transmission according to any one of the Claims 3 through 6, comprising:

a linking unit for linking said reduced rotation component and said first rotation component;

wherein said third clutch is configured on the inner circumference side of said linking unit.

8. An automatic transmission according to any one of the Claims 3 through 7, wherein the oil pressure servo of said third clutch is configured on said input shaft, so as to communicate with an oil path provided to the case via an oil

path provided to said input shaft.

9. An automatic transmission according to any one of the Claims 3 through 8, wherein said third clutch comprises a friction member and an oil pressure servo for pressurizing this friction member;

and wherein said oil pressure servo is configured on the opposite side of said reducing planetary gear in the axial direction as to said friction member;

and wherein a drum member constructing a cylinder of this oil pressure servo is linked with said input shaft.

10. An automatic transmission according to either Claim 2 or 3, wherein said first brake is configured on the opposite side in the axial direction of said planetary gear unit of said reducing planetary gear;

and wherein the oil pressure servo of said first brake is provided to the case.

11. An automatic transmission according to any one of the Claims 2, 3, or 10, comprising a second brake capable of fixing the first rotation component wherein said reduced rotation is input;

wherein said first brake and said second brake each comprise a friction member and an oil pressure servo for pressing said friction member;

and wherein the oil pressure servo of said first brake is configured on the inner circumference side in the radial

direction of the oil pressure servo of said second brake, and the friction member of said first brake meshes with a member extended from between the oil pressure servo of said first brake and the oil pressure servo of said second brake.

12. An automatic transmission according to any one of the Claims 1 through 11, comprising a second brake capable of fixing the first rotation component wherein said reduced rotation is input, wherein said engaging means is configured in a location so as to wrap in the radial direction on the inner circumference side of said second brake.

13. An automatic transmission according to any one of the Claims 1 through 12, wherein said first clutch is a clutch that engages at a relatively slow to medium speed level.

14. An automatic transmission according to any one of the Claims 1 through 13, wherein said first clutch comprises a friction member, an oil pressure servo that pressurizes this friction member, a drum unit that is constructed integrally with said oil pressure servo, and a hub unit;

and wherein said drum unit is linked with said input shaft, and said hub unit is linked with said second rotation component.

15. An automatic transmission according to any one of the Claims 1 through 14, wherein the linking member that links the reduced rotation component of said planetary gear and the first rotation component of said planetary gear unit,

are mutually linked passing through the inner circumference of said output member.

16. An automatic transmission according to any one of the Claims 1 through 15, further comprising a differential unit for outputting rotations to driving wheels, and a counter shaft unit for engaging said differential unit, wherein said output member is a counter gear meshing with said counter shaft unit.

17. An automatic transmission according to any one of the Claims 1 through 16, wherein, in a speed line chart illustrating the revolutions of said first, second, third, and fourth rotation components with the vertical axis, and the gear ratio of said first, second, third, and fourth rotation components with the horizontal axis in a corresponding manner;

said first rotation component to which said reduced rotation is input is positioned at the farthest edge in the horizontal direction, with said third rotation component, said fourth rotation component linked to said output member, and said second rotation component, corresponding in that order.

18. An automatic transmission according to one of the Claims 1 through 17, wherein said planetary gear unit is a multiple type planetary gear, comprising a first sun gear, a long pinion which meshes with said first sun gear, a short

pinion which meshes with said long pinion, a carrier for rotationally supporting said long pinion and said short pinion, a second sun gear meshing with said short pinion, and a ring gear meshing with said long pinion;

wherein said first rotation component is said first sun gear capable of inputting the reduced rotation of said reduced rotation output means, and which is capable of being fixed by the retaining of said second brake;

and wherein said second rotation component is said second sun gear capable of inputting rotations of said input shaft by the engaging of said first clutch;

and wherein said third rotation component is said carrier capable of inputting the rotations of said input shaft by the engaging of said second clutch, and which is capable of being fixed by the retaining of a third brake;

and wherein said fourth rotation component is said ring gear linked to said output member.

19. An automatic transmission according to Claim 18, wherein, in the first speed forward, said first clutch is engaged and said third brake is retained;

and wherein, in the second speed forward, said first clutch is engaged and said second brake is retained;

and wherein, in the third speed forward, reduced rotation is input to said first rotation component from said reduced rotation output means, and said first clutch is

engaged;

and wherein, in the fourth speed forward, said first clutch and said second clutch are both engaged;

and wherein, in the fifth speed forward, reduced rotation is input to said first rotation component from said reduced rotation output means, and said second clutch is engaged;

and wherein, in the sixth speed forward, said second clutch is engaged and said second brake is retained;

and wherein, in the first speed reverse, reduced rotation is input to said first rotation component from said reduced rotation output means, and said third brake is retained;

whereby six forward speed levels and one reverse speed level can be achieved.